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| 10/767,793      | 01/29/2004  | Charles Q. Lee       | 10,270              | 6196             |

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EXAMINER

SUHOL, DMITRY

ART UNIT

PAPER NUMBER

3714

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/767,793

Applicant(s)

LEE ET AL.

Examiner

Dmitry Suhol

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-9, 11-14, 18, 20-29, 32, 34 is/are rejected.
- 7) ☒ Claim(s) 5-7, 10, 15-17, 19, 30, 31 and 33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

The abstract of the disclosure is objected to because exceeds 150 words in length. Correction is required. See MPEP § 608.01(b).

### ***Double Patenting***

Claims 1-4, 8-9, 11-14, 18, 20, 23 and 25 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 6,520,775 in view of Inoue et al (JP 05-027675). The patented and the pending claims set forth the same invention of substantially the same scope except the invention of patented claims 1-8 lacks a teaching of a manikin having at least one jaw with a structure being an open topped enclosure. However, dental models utilized in teaching dental techniques are well known to be in a form of a manikin having at least one jaw that use the concept of electrical signals to indicate the positioning of a dental instrument relative the tooth model as shown by Inoue et al (figures 1, 4 and abstract). Therefore, it would have been obvious to one having ordinary skill in the art, at the time of the claimed invention to modify the patented dental training device of claims 1-8 to include a manikin having at least one jaw for the purpose of providing a more realistic model which is articulated.

Claim 21-22 and 24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 6,520,775 in view of Inoue et al (JP 05-027675) and Walker '047. The patented and the pending claims set forth the same invention of substantially the same scope except the invention of patented claims 1-8 lacks a teaching of a manikin having at least one jaw with a structure being an open topped enclosure, a first component matrix including at least 5% water by weight, conductive metallic salts consisting essentially of sodium salts, calcium salts and mixtures thereof and a probe having a shank covered by a non-conducting material. However, dental models utilized in teaching dental techniques are well known to be in a form of a manikin having at least one jaw that use the concept of electrical signals to indicate the positioning of a dental instrument relative the tooth model as shown by Inoue et al (figures 1, 4 and abstract). While Walker discloses a device similar to the device of Lee which teaches the use of saline solution as a conductive material to locate the root of a tooth with a simulated apical locator (solution 25, known to have properties of at least 5% water by weight and using sodium salts) and a probe with shank covered by non-conductive material (handles 42). Therefore, it would have been obvious to one having ordinary skill in the art, at the time of the claimed invention to modify the patented dental training device of claims 1-8 to include a manikin having at least one jaw for the purpose of providing a more realistic model which is articulated. It would have further been obvious to utilize a solution taught by Walker in the device of Lee as well as a probe with shank covered by non-conductive material for the purpose of providing a conductive material simulating

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the electrically realistic conditions of a real tooth and a portion on the probe which allow the user to handle the probe without get electrically shocked.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 26, 29, 32 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Oestreich '562. Oestreich discloses a dental jaw model containing all of the elements of the claims including, a support structure (1) as required by claim 26, a plurality of inserts (insert parts 4) wherein each insert fits modularly on the support structure (figure 2) as required by claim 26, each insert mimicking a portion of a human jaw (figure 6) as required by claim 26, each insert providing structure that allows a

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dentist to practice at least one dental procedure (teeth structure shown in figures 1-6 where it is considered that a dentist can practice dental procedures on the teeth of the insert sections) as required by claim 26. One insert providing training structures for conducting root canals, as required by claim 29, is read onto the teeth located on the inserts as shown in figure 6. A support including a first of a tongue and slot pair and each insert including a second of the tongue and slot pair, as required by claim 32, is shown in figure 6 as tongue 18 and corresponding slot 17. Inserts (4) being interchangeable with other inserts having training structure therein (teeth) and able to be assembled on the same support, as required by claim 34, is described at (col. 2, lines 30-31, where the claim clearly encompasses multiple recesses with multiple changeable inserts).

Claims 26 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoye '370. Hoye discloses a dental teaching model containing all of the elements of the claims including, a support structure (900) as required by claim 26, a plurality of inserts (gums 200 and 300) wherein each insert fits modularly on the support structure (col. 5, lines 52-54) as required by claim 26, each insert mimicking a portion of a human jaw (figure 1) as required by claim 26, each insert providing structure that allows a dentist to practice at least one dental procedure (teeth structure 400 and 500) as required by claim 26. One insert providing training in repair of dental decay (elements 402 and 403) and at least one opening (504) for receiving a tooth in a ligament mimicking matrix, as required by claim 28, are shown in figures 4 and 3, respectively.

Claim 26 is rejected under 35 U.S.C. 102(b) as being anticipated by Neill '661. Neill discloses a dental teaching aid containing all of the elements of the claims including with reference to claim 26, a support structure (50 shown in figures 7-10), a plurality of inserts (bridge 72 and other attachments described at col. 3, lines 19-21) wherein each insert fits modularly on the support structure (figures 9-10 and col. 3, lines 19-21), each insert mimicking a portion of a human jaw (figures 7-10), each insert providing structure that allows a dentist to practice at least one dental procedure (bridge and crown work as shown in figure 10).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neill '661 in view of Moore et al '229. Although Neill discloses all of the elements of the claims, as stated above, and further including an insert providing training in crown and bridge procedures (figure 10) as required by claim 27, the reference fails to explicitly teach artificial skin.

However Moore discloses a dental teaching aid which teaches the use of a simulated skin (28) and the benefits therewith (col. 4, lines 14-24). Therefore it would

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have been obvious to one having ordinary skill in the art at the time of the claimed invention to have provided the teaching aid of Neill with simulated skin as taught by Moore for the purpose of ease of molding, good colorability, realistic flexibility, stability resistance to tears and abrasions and ease of cleaning.

### ***Allowable Subject Matter***

Claims 5-7, 10, 15-17, 19, 30-31, and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Suhol whose telephone number is 571-273-4430. The examiner can normally be reached on Mon - Friday 9am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on 703-308-1745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ds

Dmitry Suhol  
*Dmitry Suhol*